

Measuring technology for thermal energy  
Residential Heating / Cooling

Landis  
Gyr+  
manage energy better



Ultrasonic Heat Meter / Cooling Meter

ULTRAHEAT / ULTRACOLD  
T230

**The Flyweight:**

Simply the best of  
residential thermal energy meters  
with a composite-flow part

## Your needs answered with ease

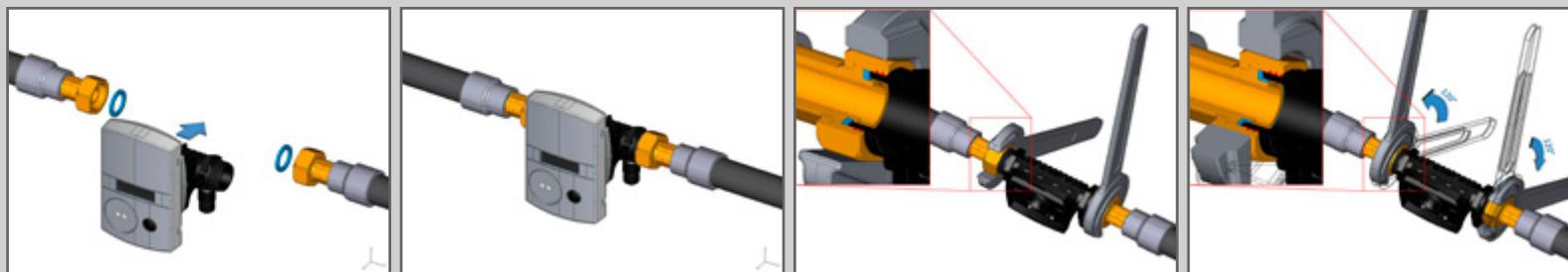
The ULTRAHEAT®T230 is the new generation of ultrasonic thermal energy meter especially developed and optimized to meet residential needs. The meter has impressive features; light in weight, robust, economic efficiency, user-friendliness, and its new individuality. Improved features made for easier handling and understanding. For cooling applications the ULTRACOLD®T230 is the right choice.



### Key Features

- Ultrasonic heat meter or cooling meter
- Ready for Smart Metering
- Flat, removable calculator
- Huge and easy readable display
- Temperature range: 5-90 °C
- Huge dynamic range: 1:1000
- Storage for 24 monthly values
- 2 monthly set days
- Environmental-friendly construction
- Fast and save mounting
- Any mounting orientation without limitation
- Glass-fiber reinforced measuring tube - robust and lightweight
- Comply with the strict European directive (class 2)
- Fast communication
- Precise, robust, nonwearing

## Easy Installation



## Technical Data

Approval	MID (EN 1434)
Protection class (flow part)	IP 54 / (IP65)
LCD	7-digit
Energy units	kWh / MWh or MJ / GJ
Temperature range	5-90 [°C]
Nominal pressure	PN16 [bar]
Max. diff. of temp.	80 [K]
Min. diff. of temp.	3 [K]
Switch-off limit	0.2 [K]

Nominal flow rate (qp)	0.6	1.5	2.5	[m³/h]
Max. flow (qs)	1.2	3.0	5.0	[m³/h]
Min. flow (qi)	6	15	25	[l/h]
Operating limit	1.2	3	5	[l/h]
Mounting length	110	110 / 130	130	[mm]
Thread connection	G¾	G¾ / G1	G1	--
Pressure loss at qp (mounting length 110 mm)	75	135	--	[mbar]
Pressure loss at qp (mounting length 130 mm)	--	135	165	[mbar]

## Communication Interfaces

**M-Bus-Interface** (option),  
with 1.5 m cable connected, with galvanic isolation

Norm:	EN 13757-2 and 13757-3
Voltage:	50 V max.
Current:	1 M-Bus lead (1.5 mA)
Addressing:	primary or secondary
Permitted mean frequency of reading:	>1 min @ 2400 bd

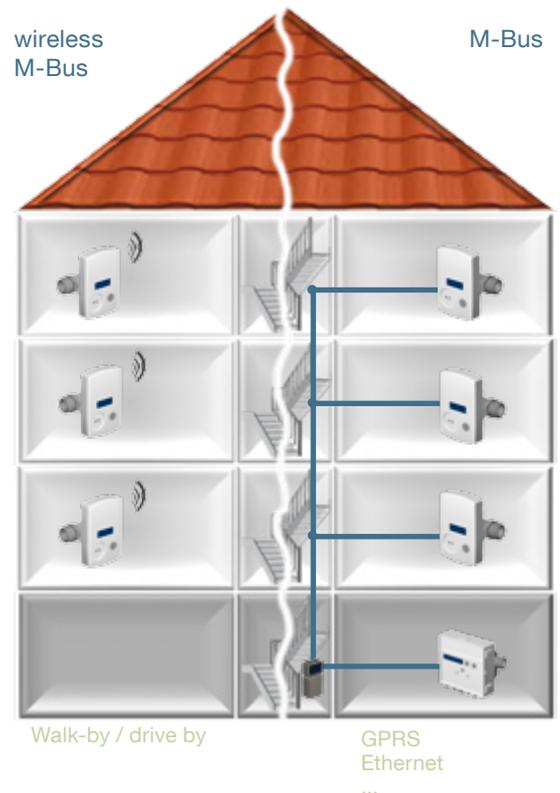
**Wireless M-Bus-Interface** (option),  
with integrated antenna, pre-assembled

Norm:	EN 13757-4 and Open Metering Specification
Mode:	868 MHz, T1
Profile:	Stationary or mobile reading
Encryption:	AES-128 (optional)

**Pulse output** (option),  
with 1.5 m cable, 4 wires, pre-assembled

Norm:	EN 1434-2 class OB / OC bipolar
Output channel 1:	Energy pulses
Output channel 2:	Volume pulses (changeable)
Pulse significance:	Standard or high-resolution

## Communication examples



+ Billing values  
+ Periodic data  
+ Meters  
+ Statuses  
+ Events

e.g. ADVANCE Software



### **Superiority by economic efficiency**

Ultrasonic heat and cooling meters, especially the T230, represent a promising alternative to mechanical meters. Due to their numerous advantages they will substitute the conventional meters in long term.

The T230 offers a host of impressive and convincing technical advancements. For example has the T230 a significantly lower pressure loss, which simplifies the dimensioning of the meter and economizes expensive operating current year by year. Thus helps to save your money.

### **Confidence by accuracy**

The T230 works with the proven ultrasonic measurement technology of Landis+Gyr giving the highest accuracy, no maintenance and stable measurement for years and years. Ultrasound measurement of flow is as precise as overloadable, also insensitive to dirt in the heating water and it ensures a smooth operation over time.

This is what we call state-of-the-art technology.

### **Customer satisfaction**

With the huge dynamic range of 1:1000 all flow rates can precisely be measured, even the smallest. The hard-coded starting value amounts only a few liters per hour and isn't be affected by soiling or abrasion. This enables a fair and suitable billing as well as high customer satisfaction.

### **Ecological efficiency**

To meet market requirements, customer satisfaction and environmental friendliness we have used a new durable material in the volume measuring tube for residential meter application. The robust glass-fiber reinforced tube is very light and makes the meter easy to handle and simplifies the installation. This saves transportation costs and reduces emissions. The reduction of batteries with less Lithium protects the environment as well.

S  
T  
E  
E  
N  
E  
B

### **New use- and helpful features**

Modern features simplify the handling of the meter from the installation up to the immediate identification of mounting errors.

The 2 monthly set days for energy, volume and maxima are very helpful at a tenant change. Additional to the established features, such as permanent error detection and resetting of the missing time after first installation etc; additional information like e.g. activity indication and storage of maxima have been added. This creates more plausibility and helps to identify disturbances in systems.

### **Faster communication**

The T230 is equipped as standard with an optical interface according to EN 1434-3, for a faster mobile read out or for the service software UltraAssist.

For the more comfortable remote read out the meter can be ordered with a factory fitted M-Bus-module.

Space is available within the meter for future communication interfaces enabling an upgrade for new standards and technologies, e.g. radio communication.

### **Removable calculator - individual mounting**

The smart calculator is supplied fitted on the measuring tube but may be mounted on the wall (split mounting) to enable ease of reading and it also helps to prevent condensation in the cooling meter. Even the for mechanical meters not allowed over-head mounting is possible without any difficulty.

Whether fitted on the measuring tube or on the wall the calculator can be rotated to make it easier to read the display.

## Manage energy better

Landis+Gyr is the leading global provider of integrated energy management products tailored to energy company needs and unique in its ability to deliver true end-to-end advanced metering solutions. Today, the Company offers the broadest portfolio of products and services in the electricity metering industry, and is paving the way for the next generation of smart grid.

Landis+Gyr, an independent growth platform of the Toshiba Corporation (TKY:6502) and 40% owned by the Innovation Network Corporation of Japan, operates in 30 countries across five continents, and employs 5,000 people with the sole mission of helping the world manage energy better.

More information is available at [www.landisgyr.eu](http://www.landisgyr.eu).

### Landis+Gyr Business Line Heat in short

- “Made in Germany” - own development, manufacturing and sales
- Since 1983 experiences with ultrasonic thermal energy meters
- Operations on all five continents
- Order-related production depending on individual order codes
- Modularity and software optimization leads to fast reaction times on orders
- Certified acc. to ISO 9001, 14001 and EC Directive D + H1 (MID)
- State-approved test center
- Service-Center for revisions and repairs
- Committed to improved energy efficiency and environmental conservation
- Solid and established partner network

#### Landis+Gyr AG

Theilerstrasse 1  
6301 Zug  
Switzerland  
phone: +41 41 935 6000  
fax: +41 41 935 6601  
[info@landisgyr.com](mailto:info@landisgyr.com)  
[www.landisgyr.eu](http://www.landisgyr.eu)

#### Landis+Gyr GmbH

Humboldtstr. 64  
D-90459 Nuremberg  
Germany  
phone: +49 911 723 7036  
fax: +49 911 723 7301

[info-nbg.de@landisgyr.com](mailto:info-nbg.de@landisgyr.com)